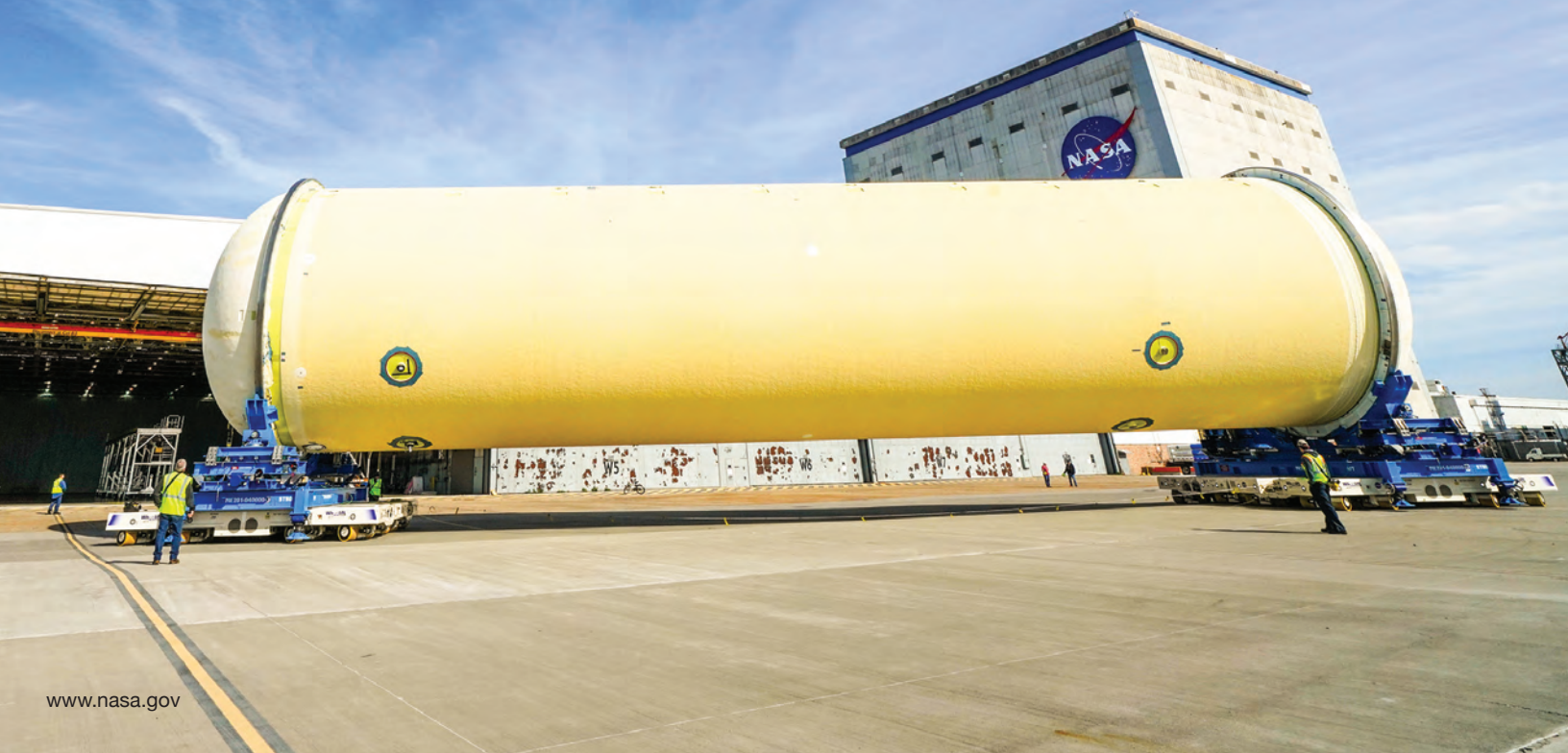
National Aeronautics and
Space Administration

SPACE LAUNCH SYSTEM

FEBRUARY 2019

GETTING READY FOR THE CORE STAGE



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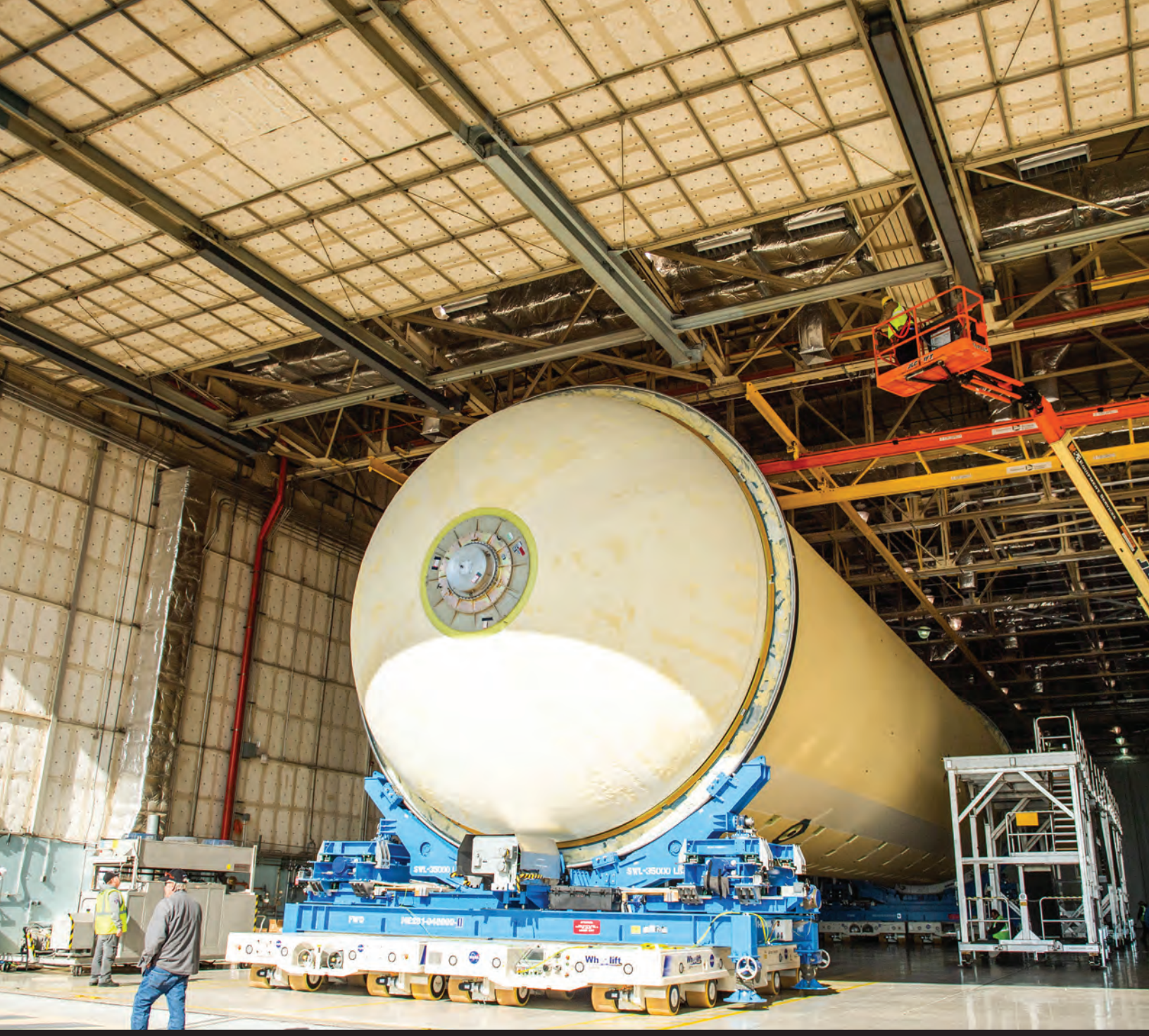


The liquid hydrogen tank has completed thermal protection application and will be mated to other parts of the core stage that will fly on Exploration Mission-1.

Technicians at NASA's Michoud Assembly Facility in New Orleans completed application of the thermal protection system on the 130-foot-long liquid hydrogen (LH2) tank for NASA's Space Launch System rocket.

The LH2 tank is the largest piece of flight hardware to ever be insulated at Michoud. The hardware requires thermal protection due to extreme temperatures it will face during launch and to keep the liquid hydrogen at minus 423 degrees Fahrenheit during the flight to space. Now the tank is being prepared for joining with other major structures to form the rocket's massive 212-foot core stage, which serves at the backbone of SLS.

The core stage includes the liquid hydrogen and liquid oxygen tanks, which hold 733,000 gallons of propellant to power the stage's four RS-25 engines. The engines will produce 2 million pounds of thrust to help send the rocket to orbit for Exploration Mission-1, the first flight of SLS and the Orion spacecraft that will travel beyond the Moon.

The world's most powerful rocket, SLS will send astronauts on deep space missions farther than humans have ever travelled before.

Learn more about the SLS core stage here:
go.nasa.gov/2TmoNie

NASA AND GUESTS CELEBRATE CORE STAGE INTEGRATION

NASA staff, media and elected officials gathered Feb. 28 to celebrate the SLS rocket's forward join, which marks the beginning of integration and assembly of the rocket's core stage. The forward join effectively connects three major structures — the forward skirt, the liquid oxygen tank and the intertank — to form the top part of the core stage. When complete, the core stage will stand 212 feet tall and include four RS-25 rocket engines, propellant tanks and flight computers.

Learn more about how the rocket's core stage comes together here: **bit.ly/2TAa9XT**

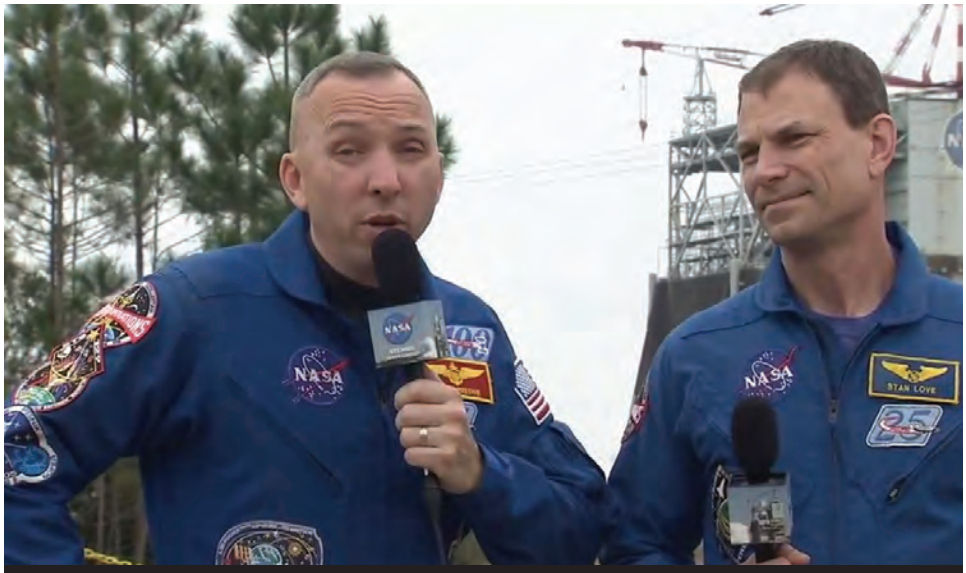
ASTRONAUTS AT ENGINE TEST

The ninth and final test in a series evaluating next-generation parts for SLS engines was successfully completed Feb. 28.

The 500-second hot fire, conducted at NASA's Stennis Space Center in Mississippi, pushed the RS-25 developmental engine No. 0525 to 113 percent of its original thrust design for a record 430 seconds, about four times longer than any previous hot fire at that level. It was the fourth time the engine has been pushed to 113 percent.

The test series, which began last August, evaluated new components made with innovative manufacturing techniques that save time and money.

Read the full story: **go.nasa.gov/2EqK581**



Astronauts Randy Bresnik and Stan Love gave live updates during a Feb. 28 RS-25 engine test at Stennis Space Center.

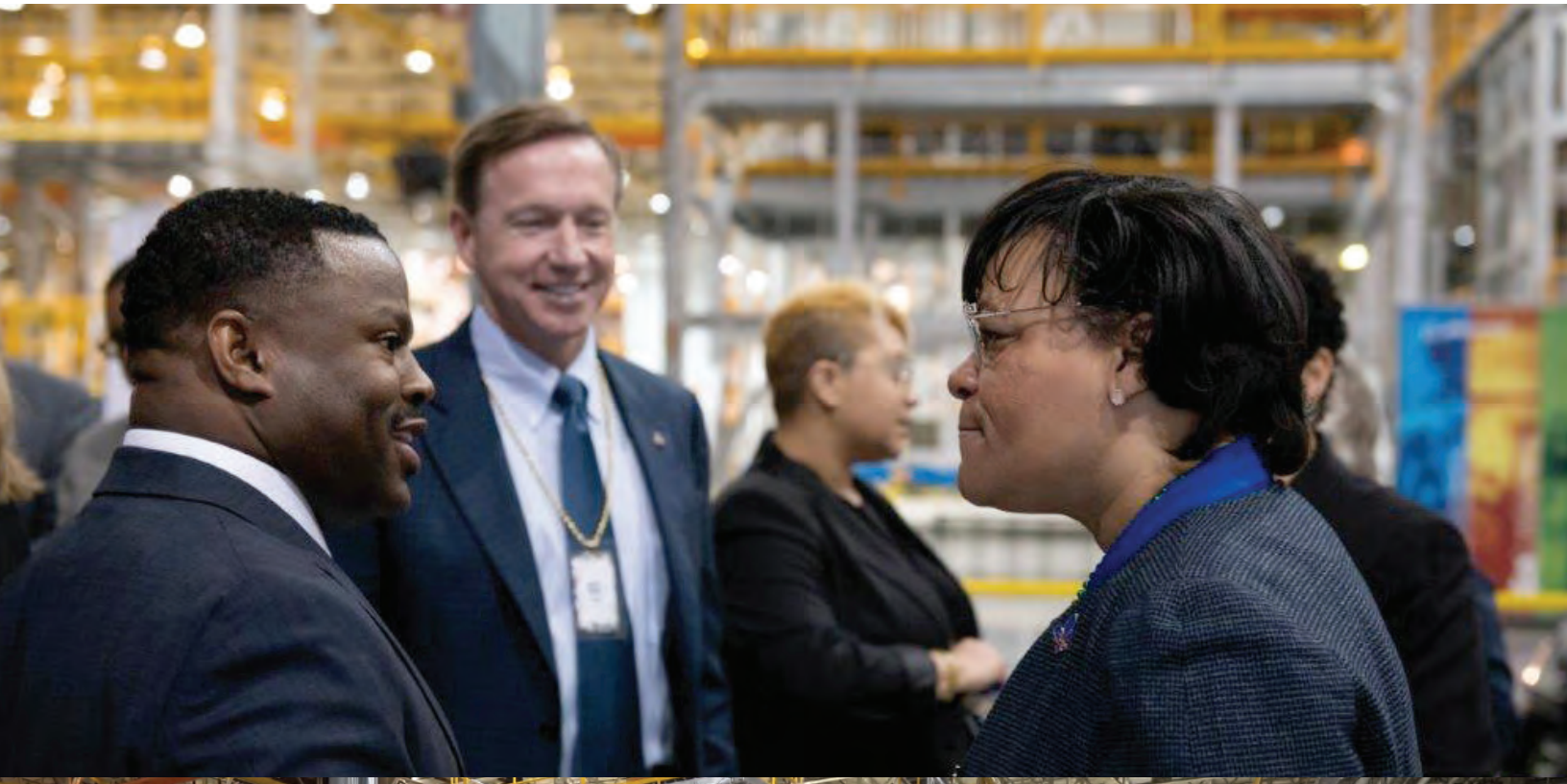
WHAT'S NEW IN SLS SOCIAL MEDIA

ROCKET SCIENCE IN 60 SECONDS

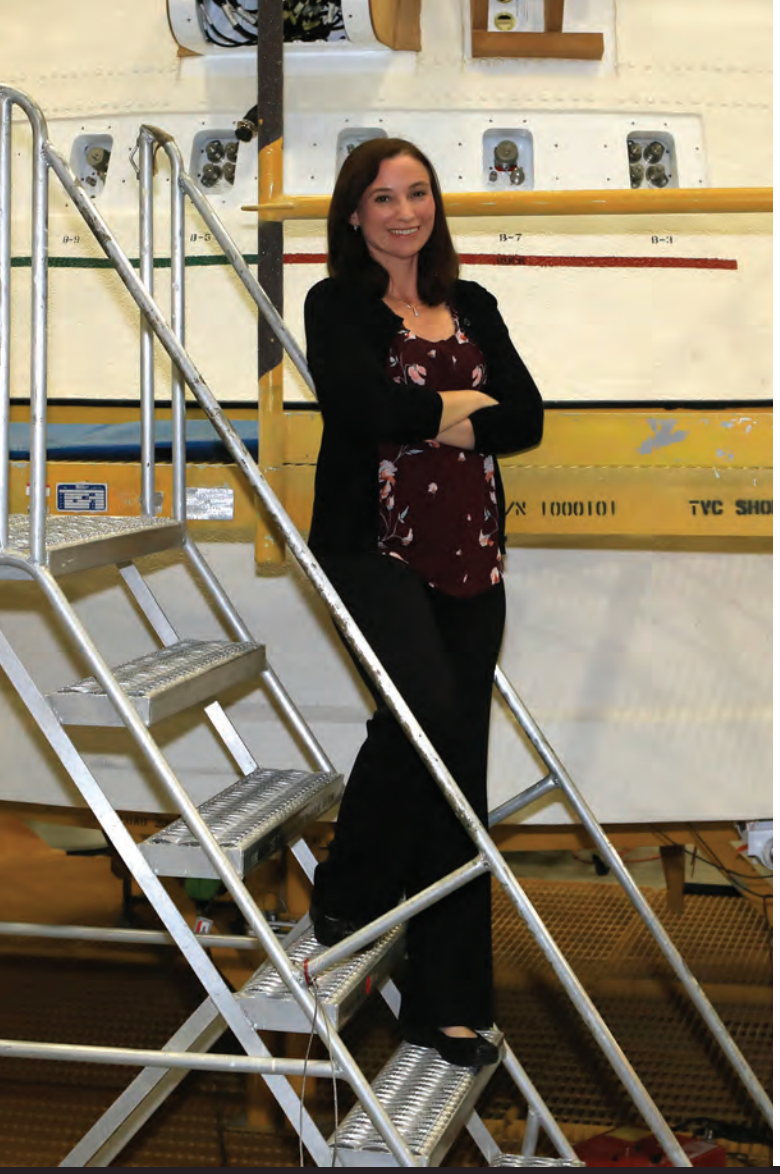
The SLS core stage, the largest piece of the rocket, consists of five main structures totaling more than 200 feet in height. Chad Bryant, core stage manager for SLS, explains how the pieces come together to form the world's most powerful rocket.

Watch the latest Rocket Science video here: **bit.ly/2UrgPVq**

MEDIA AND ELECTED OFFICIALS VIEW SLS PROGRESS



New Orleans Mayor LaToya Cantrell (top right) talks with Kevin McGhaw (top left), Deputy Director of Marshall Space Flight Center's Office of Strategic Analysis and Communications, and Steve Miley, Associate Director of Marshall Space Flight Center, during an SLS milestone event at Michoud Assembly Facility in New Orleans Feb. 28. Media and area elected officials visited Michoud to view progress on the SLS core stage, and watched an RS-25 engine test at Stennis Space Center in south Mississippi.



I AM BUILDING SLS: MICHELLE GONZALEZ

Space has been a part of Michelle Gonzalez's life as long as she can remember. She grew up close to NASA's Kennedy Space Center in Florida and remembers running outside to see the space shuttle launches and thinking that one day she wanted to be a part of the action.

Today, Gonzalez works as the Northrop Grumman program manager for the booster avionics and flight safety system for NASA's new rocket, the Space Launch System. Her team is working to ensure booster avionics hardware is ready for EM-1, the first flight of SLS and Orion.

Read the full story: **go.nasa.gov/2NxXdfL**

SPACEFLIGHT PARTNERS:
Canavas, Inc.

NUMBER OF EMPLOYEES: *100*

LOCATION: *Huntsville, AL.*

WHAT THEY DO FOR SLS:
Canvas, Inc. is a woman-owned small business responsible for the Launch Vehicle Stage Adapter (LVSA) end item specifications, operational requirements and verification work for SLS flight readiness reviews.

FOLLOW THE PROGRESS OF NASA'S NEW LAUNCH VEHICLE FOR DEEP SPACE:

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COMING NEXT MONTH:

Testing RS-25 engine controllers

Exploration upper stage engine testing